

In re Application of BEARDSLEY et al.
Serial No. 10/043,792

REMARKS

The Office action has been carefully considered. The Office action rejected claims 1-13 and 15-47 under 35 U.S.C. § 103(a) as unpatentable over Keller in view of U.S. Patent No. 6,779,134 to Laviolette et al. ("Laviolette"). Further, the Office action rejected claim 47 under 35 U.S.C. §101 as being directed to non-statutory subject matter. Further yet, the Office action rejected claims 1, 16, 28, 30, and 42 under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement. Applicants respectfully disagree.

By present amendment, claims 1, 16, 28, 30, 42 and 47 have been amended for clarification and not in view of the prior art. Applicants submit that the claims as filed were patentable over the prior art of record, and that the amendments herein are for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability.

Reconsideration is respectfully requested.

Applicants thank the Examiner for the interview held (by telephone) on April 17, 2006. During the interview, the Examiner and applicants' attorney discussed the claims with respect to the prior art. The essence of applicants' position is incorporated in the remarks below.

Prior to discussing reasons why applicants believe that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is directed to a system and method by which a software product may be tested on multiple client computers on various platforms.

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Typically, product developers may submit requests for tests on their products, in the form of test packets, to a test component. For each platform and language (*i.e.*, group) on which a product developer wants a product tested, the product developer may provide a test packet that defines these specific tests. According to an embodiment of the invention, the test component may search, via an autolab component conducting an availability assessment, for an available client machine for performing the tests in the test packet. The autolab component may accomplish two tasks. First, the autolab component may find an available client computer suitable to handle and perform the test. Second, the autolab component may then assess the loading capability of the identified client machine and if the loading capability is favorable, the client machine may then be assigned the test packet. The client machine may perform the tasks in the test packet, and forward the results back to the test component. Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

§101 Rejection

The Office action rejected claim 47 as being directed to non-statutory subject matter. More specifically, the Office action contends that because the applicants disclose communication media that may be acoustic, RF, infrared and otherwise wireless media, that the term computer-readable medium should be interpreted broadly such that the scope of the applicants' definition exceeds the tenets of proper statutory subject matter. Applicants respectfully disagree.

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Section 2106(IV)(B)(1)(a) of the MPEP states that functional descriptive material that is recorded on some computer-readable medium is structurally and functionally interrelated to the medium and is statutory since use of technology permits the function of the descriptive material to be realized. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *In re Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim). Carrier waves and modulated signals are examples of data that may be interpreted by a computer (*i.e.*, a computer-readable medium) and may also be considered a product-by-process which is also statutory *per se* if the underlying process is statutory. Furthermore, the MPEP specifically states (section 2106(IV)(B)(1)(c)) that a signal claim directed to a practical application is statutory regardless of its transitory nature. See *O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980). Recent court decisions have also held that "signals" are proper statutory subject matter. See *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053, 22 USPQ.2d 1033 (CCPA 1992), (wherein the court held that the view that there is nothing necessarily physical about "signals" is incorrect and that computer-program related inventions can be claimed in terms of "signals" as computers operate according to signals. In fact, anything that is being manipulated or transformed can typically be drafted in terms of "signals").

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As such, applicants submit that the term computer-readable medium, as is currently defined in the applicants' specification is well within the proper limits of statutory subject matter. Notwithstanding however, applicants have amended claim 47 to recite a computer-readable storage medium at the suggestion of the Examiner in an effort to expedite examination, but not in view of any prior art or any contention by the Office action herein. As such, applicants respectfully request that the §101 rejection.

§112 Rejections

The Office action rejected claims 1, 16, 28, 30, and 42 under §112, first paragraph for failing to comply with the written description requirement. More specifically, the Office action contends that the previous amendments to these claims to include the recitation of "an availability of loading capacity" is not supported by the applicants' specification. Applicants respectfully disagree.

Turning to the applicants' specification, page 19 begins a disclosure of an autolab component. Specifically, it is disclosed that a test component 202 includes an autolab component 230 that is configured to search for client computers 212 or 214 that are available to run a test, and assigns the tests to available client computers. That is, by checking to see if a client computer is available, a determination about the client's loading capacity is necessarily performed, although these specific words are not used in the text of the specification.

The specification goes on further to describe this process on page 20. It recites, generally, at step 504, the autolab component 230 retrieves one of the

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pending test packets from the database 222. A determination is made if all tests have been run on the packet at step 506 (e.g., whether a record count is zero), and, if so, the process loops back and the next packet is retrieved at step 504. If not, then step 506 branches to step 508, where the test component 202 searches, via the autolab component 230, for an available client machine 212, 214 for performing the tests in the test packet. As further described below, an available client machine 212, 214 may be idle and awaiting a test packet, or may already be running the tasks in a test packet, but should be capable of (e.g., includes the proper groups and applications for) running the tasks of the test packet. Thus, a further determination is made as to particular client's loading capacities.

Notwithstanding these disclosures, applicants have amended the term "loading capacity" to recite "loading capability". In amending this term, applicants have more accurately described that which they regard as their invention. Applicants submit that loading capability is certainly a term that is captured and described by the specification, as pointed out above. Applicants respectfully request that the §112 rejections of these claims be withdrawn.

§103(a) Rejections

Turning to the rejections on the art, amended claim 1 generally recites an interface configured to receive a request for performance of test jobs on multiple machines, each of the test jobs including a defined platform for performance of the test jobs and an autolab component configured to select one of the multiple machines as a selected machine based upon a platform on the selected machine

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and based upon an availability of loading capability of the selected machine, and to act on the request by assigning at least one of the test jobs to the selected machine.

The Office action rejected claim 1 as being unpatentable over Keller in view of Laviolette. More specifically, the Office action contends that Keller teaches a computer test system comprising an interface configured to receive a request for performance of test jobs on multiple machines. Column 1, lines 52-59 of Keller is referenced. Further, the Office action contends that Keller teaches that each of the test jobs includes a defined platform for performance of the test jobs. Column 4, lines 61-63 of Keller is referenced. The Office action correctly acknowledges that Keller fails to disclose an "autolab" component configured to select one of the multiple machines as a selected machine based upon a platform on the selected machine, and/or acting on the request by assigning at least one of the test jobs to the selected machine.

However, the Office action contends that Laviolette does teach these recitations. Column 3, lines 4-7, lines 27-28, and lines 53-55 of Laviolette are referenced. The Office action concludes that one of ordinary skill in the art at the time the invention was made would have combined the teachings of Keller and Laviolette because the resulting system would have improved accuracy and efficiency in software testing. Applicants respectfully disagree.

To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in

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judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01

Applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. As acknowledged by the Office action, Keller does not teach an autolab component configured to select one of the multiple machines as a selected machine based upon a platform on the selected machine, or acting on the request by assigning at least one of the test jobs to the selected machine. As is discussed below, the teachings of Laviolette do not remedy this deficiency. Furthermore, the Office action has impermissibly combined these references in an attempt to support a §103(a) rejection.

In specific, Laviolette is directed to almost the same kind of system that is disclosed in Keller. That is, Laviolette discloses a system whereby a software test system is able to detect a configuration on a number of coupled test stations. In this manner, as test jobs are received at the software test system, the test job may be routed to a specific test station that is configured to handle the identified type of test. As was the case with Keller, however, the test jobs are passed on to test stations without regard to current loading capability or loading capacity. That is, the test job is simply routed straight away to the appropriate test machine even if

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the appropriate test machine is already performing a different test job. Laviolette provides for a job queue such that the test job waits for the current test job to complete, but this is simply not any assessment whatsoever of the current loading capacity or capability of the particular test station.

In contrast, claim 1 is directed to a testing system that employs an autolab component that assesses both platform and loading capability prior to assigning a test job to a client machine. More particularly, the autolab component of the present invention may first assess which client machine or client machines have thereon the specific environment needed to perform a particular test job. Then, the autolab component may assess the availability (e.g., based on loading capability and current job tasks) of suitable client machines and/or platforms and may assign the test job to a particular client machine having availability. In this manner, if one client machine is currently engaged in an operation, then the autolab component may choose a different client for handling the test job, *i.e.*, a client with a better loading capability than the first client.

In terms of the language recited in claim 1, the computer test system comprises an autolab component configured to select one of the multiple machines as a selected machine based upon a platform on the selected machine and based upon an availability of loading capability of the selected machine. Because Keller and Laviolette do not teach, let alone show any cognizance of assessing the availability, based on loading capacity or capability, of the selected machine, these references cannot possibly be construed to teach the recitations of claim 1.

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Furthermore, these references cannot be permissibly combined in this manner as each one teaches away from the applicants' invention. Specifically, each of these references teaches forwarding test jobs to test stations without regard whatsoever to the current loading capacity or capability. Thus, no combination of these references may then turn around and teach that some kind of assessment of loading capacity or capability is then disclosed. Any such conclusion that the combination of these references may teach a concept which neither one discloses in any manner is an overly broad conclusion, and is clearly based on impermissible hindsight knowledge gleaned from applicants' teachings. Such broad, conclusory statements do not come close to adequately addressing the issue of motivation to combine, are not evidence of obviousness, and therefore are improper as a matter of law. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Further, if anything, the references teach away from such a combination, as discussed above. Applicants submit that claim 1 is allowable over the prior art of record for at least these reasons.

Applicants respectfully submit that dependent claims 2-5, 7-13, and 15, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Keller and Laviolette, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 1 and therefore these claims are also allowable over the prior art of record. In addition to the recitations

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of claim 1 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 5 recites the computer test system of claim 1, wherein the test component is configured to create a personalized test package for the selected machine based upon the platform and applications available at the client machine. As discussed above, Keller and Laviolette do not assess anything about the loading capability of client machines. Thus, Keller cannot possibly be construed to teach creating a personalized test package for the selected machine based upon the platform and applications available at the client machine as recited in claim 5. Applicants submit that claim 5 is allowable over the prior art of record for at least this additional reason.

As another example, claim 15 recites the computer test system of claim 1, wherein the autolab component selects the selected machine based upon the present imaging of the selected machine. Again, as discussed above, Keller and Laviolette do not assess anything about the loading capability of client machines. Thus, Keller cannot possibly be construed to teach selecting the selected machine based upon the present imaging of the selected machine as recited in claim 15. Applicants submit that claim 15 is allowable over the prior art of record for at least this additional reason.

Turning to the next independent claim, amended claim 16 generally recites a storage for a request for performance of test jobs on multiple machines, each of the test jobs including a defined platform for performance of the test jobs and an autolab component configured to select one of the multiple test machines as a

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selected machine based upon availability of loading capability thereof, and to act on the request by assigning at least one of the test jobs to the selected machine.

The Office action rejected claim 16 as unpatentable over Keller in view of Laviolette. More specifically, the Office action contends that Keller teaches the recitations of claim 16 by referencing Keller's software testing automation system described in column 1, line 50 to column 4, line 26 and Laviolette's automation in column 3, lines 3-55. Applicants respectfully disagree.

Again, applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. As specifically acknowledged by the Office action, Keller does not teach an autolab component configured to select one of the multiple test machines as a selected machine based upon availability of loading capability thereof. As is discussed above and below, the teachings of Laviolette do not remedy this deficiency. Furthermore, the Office action has impermissibly combined these references in an attempt to support a §103(a) rejection.

In specific, Laviolette is directed to a very similar system to the one disclosed in Keller. Laviolette discloses a system whereby a software test system is able to detect a configuration on a number of test stations. As test jobs are received at the software test system, the test job may be routed to a specific test station that is configured to handle the identified type of test. As was the case with Keller, however, the test jobs are passed on to test stations without regard to current loading capability or loading capacity. That is, the test job is simply routed straight away to the appropriate test machine even if the appropriate test machine is already performing a different test job.

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In contrast, claim 16 is directed to a testing system that employs an assessment of both platform capability and platform availability prior to assigning a test job to a client machine. More particularly, the autolab component of the present invention may first assess which client machine or client machines have thereon the specific environment needed to perform a particular test job. Then, the autolab component may assess the availability (e.g., based on loading capability and current job tasks) of suitable client machines and/or platforms and may assign the test job to a particular client machine having availability. In this manner, if one client machine is currently engaged in an operation, then the autolab component may choose a different client for handling the test job, *i.e.*, a client with a better loading capability than the first client.

Furthermore, as recited in claim 16, the computer test system comprises an autolab component configured to select one of the multiple machines as a selected machine based upon a platform on the selected machine and based upon an availability of the selected machine. Because Keller and Laviolette do not teach, let alone show any cognizance of assessing the availability, based on loading capacity, of the selected machine, these references cannot possibly be construed to teach the recitations of claim 16.

Further yet, these references cannot be permissibly combined in this manner as each one at best teaches away from the applicants' invention. Specifically, each of these references teaches forwarding test jobs to test stations without regard whatsoever to the current loading capacity or capability. Thus, no combination of these references may then turn around and teach that some kind of

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assessment of loading capacity or capability is then disclosed. Such a combination and its conclusion is clearly based on impermissible hindsight knowledge gleaned from applicants' teachings; any such conclusion that the combination of these references may teach a concept which neither one discloses in any manner is an overly broad conclusion. Such broad, conclusory statements do not come close to adequately addressing the issue of motivation to combine, are not evidence of obviousness, and therefore are improper as a matter of law. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Further, if anything, the references teach away from such a combination, as discussed above. Applicants submit that claim 16 is allowable over the prior art of record for at least these reasons.

Applicants respectfully submit that dependent claims 17-20 and 22-27, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 16 and consequently includes the recitations of independent claim 16. As discussed above, Keller and Laviolette, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 16 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 16 noted above, each of these dependent claims includes additional patentable elements.

Turning to the next independent claim, amended claim 28 generally recites a computer test system comprising storage for a request for the performance of test jobs on multiple machines, each of the test jobs including a defined platform for

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performance of the test jobs and an autolab component configured to select one of multiple test machines based upon the platform thereon and based on the availability of loading capability thereof, and to act on the request by assigning at least one of the test jobs to the selected machine.

The Office action rejected claim 28 as unpatentable over Keller in view of Laviolette. More specifically, the Office action contends that Keller teaches the recitations of claim 28 by referencing Keller's software testing automation system described in column 1, line 50 to column 4, line 26 and Laviolette's automation in column 3, lines 3-55. Applicants respectfully disagree.

Again, applicants submit that the Office action has failed to establish a *prima facie* case for obviousness. As specifically acknowledged by the Office action, Keller does not teach an autolab component configured to select one of the multiple test machines as a selected machine based upon availability of loading capability thereof and Laviolette do not remedy this deficiency. Furthermore, the Office action has impermissibly combined these references in an attempt to support a §103(a) rejection.

Laviolette routes test jobs to a specific test station that is configured to handle the identified type of test without regard to the test station current loading. As was the case with Keller, the test jobs are passed on to test stations without regard to current loading capability or loading capacity. In contrast, claim 28 is directed to a testing system that employs an assessment of both platform and loading capability prior to assigning a test job to a client machine. More particularly, the autolab component of the present invention may first assess which

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client machine or client machines have thereon the specific environment needed to perform a particular test job. Then, the autolab component may assess the availability (e.g., based on loading capability and current job tasks) of suitable client machines and/or platforms and may assign the test job to a particular client machine having availability. In this manner, if one client machine is currently engaged in an operation, then the autolab component may choose a different client for handling the test job, *i.e.*, a client with a better loading capability than the first client.

As discussed previously, not only does these prior art references fail to teach the recitations of claim 28 but these references also cannot be permissibly combined in this manner as each one teaches away from the applicants' invention. Specifically, each of these references teaches forwarding test jobs to test stations without regard whatsoever to the current loading capacity or capability. Thus, no combination of these references may then turn around and teach that some kind of assessment of loading capacity or capability is then disclosed. Any such conclusion that the combination of these references may teach a concept which neither one discloses in any manner is an impermissibly broad conclusion based on hindsight reasoning gleaned from applicants' teachings.

Applicants respectfully submit that dependent claim 29, by similar analysis, is allowable. This claim depends directly from claim 28 and consequently includes the recitations of independent claim 28. As discussed above, Keller and Laviolette, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 28

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and therefore this claim is also allowable over the prior art of record. In addition to the recitations of claim 28 noted above, claim 29 includes additional patentable elements.

Turning to the next independent claim, amended claim 30 generally recites a test component configured to receive a request for the performance of a test job on a computer, a manager component for causing the test job to be performed based on an availability of loading capacity of resources, and an image component in which the test job is conducted.

The Office action rejected claim 30 as unpatentable over Keller in view of Laviolette. More specifically, the Office action contends that Keller teaches the recitations of claim 30 by referencing Keller's software testing automation system described in column 1, line 50 to column 4, line 26 and Laviolette's automation in column 3, lines 3-55. Applicants respectfully disagree.

Again, claim 30 recites a manager component for causing the test job to be performed based on an availability of loading capacity of resources. This is a concept that is not taught by the prior art of record. Both Keller and Laviolette teach systems that forward test jobs to a test station based upon the ability of the test station to perform a particular test, but without regard to any current loading capability at the specified test station. Therefore, claim 30 is patentably distinct from the prior art of record. Furthermore, Keller and Laviolette may not be permissibly combined in the manner suggested by the Office action as discussed above. Applicants submit that claim 30 is allowable over the prior art of record for at least these reasons.

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Applicants respectfully submit that dependent claims 31-41, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 30 and consequently includes the recitations of independent claim 30. As discussed above, Keller and Laviolette, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 30 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 30 noted above, each of these dependent claims includes additional patentable elements.

Turning to independent claim 42, this claim generally recites receiving a request for performance of test jobs on multiple machines, each of the test jobs including a defined platform for performance of the test jobs, selecting one of the multiple machines as a selected machine based upon a platform on the selected machine and based on the availability of loading capability thereof, and acting on the request by assigning one of the test jobs to the selected machine.

The Office action rejected claim 42 as unpatentable over Keller in view of Laviolette. More specifically, the Office action contends that Keller teaches the recitations of claim 42 by referencing Keller's software testing automation system described in column 1, line 50 to column 4, line 26 and Laviolette's automation in column 3, lines 3-55. Applicants respectfully disagree.

Again, claim 42 recites selecting one of the multiple machines as a selected machine based upon a platform on the selected machine and based on the availability of loading capability thereof. This is a concept that is not taught by the

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prior art of record. Both Keller and Laviolette teach systems that forward test jobs to a test station based upon the ability of the test station to perform a particular test, but without regard to any current loading capability at the specified test station. Therefore, claim 42 is patentably distinct from the prior art of record. Furthermore, Keller and Laviolette may not be permissibly combined in the manner suggested by the Office action as discussed above. Applicants submit that claim 42 is allowable over the prior art of record for at least these reasons.

Applicants respectfully submit that dependent claims 43-47, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 42 and consequently includes the recitations of independent claim 42. As discussed above, Keller and Laviolette, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 42 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 42 noted above, each of these dependent claims includes additional patentable elements.

For at least these additional reasons, applicants submit that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and timely allowance of this application is earnestly solicited.

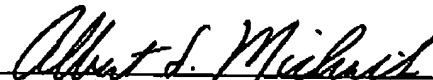
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CONCLUSION

In view of the foregoing remarks, It is respectfully submitted that claims 1-13 and 15-47 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Response, along with transmittal and facsimile cover sheet, are being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. 1.6(d) on the date shown below:

Date: June 6, 2006


Albert S. Michalik

2700 Third Amendment